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RESOLUTION NO. 75-65

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF VISTA, CALIFORNIA, AMENDING THE GENERAL PLAN OF THE CITY OF VISTA BY ADDING A SEISMIC SAFETY ELEMENT THERETO

PLANNING CASE NO: 75-9
ENVIRONMENTAL NO: E 75-18

WHEREAS, the City Council of the City of Vista has adopted the General Plan of the City of Vista, as amended; and

WHEREAS, on April 21, 1975, the Planning Commission of the City of Vista duly adopted Resolution No. 75-49 recommending to the City Council the amendment of the General Plan of the City of Vista by adding Seismic Safety Element thereto; and

WHEREAS, the contents of a duly certified Environmental Impact Report was read and considered prior to acting on the amendment; and

WHEREAS, Section 65357 of the Government Code provides for the amendment of the General Plan or any part or element thereof by resolution of the legislative body of the City.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Vista amends the General Plan of the City of Vista, as follows:

1. That the General Plan of the City of Vista is hereby amended by adding thereto a Seismic Safety Element consisting of a text identified as the "City of Vista General Plan - Seismic Safety Element," the original of which is on file in the office of the Director of Planning of the City of Vista, and a copy of which is attached hereto as Exhibit A, and by this reference, incorporated herein as if set forth in full.

2. The overriding considerations in approving the amendments despite the environmental impacts are as follows:

A. The State mandates adoption of a Seismic Safety Element.

B. The adoption of the Element will have a long term beneficial impact on the environment.

3. The City Clerk is directed to endorse and sign the said referenced text identified as "City of Vista General Plan - Seismic Safety Element" to indicate the adoption of this resolution by the City Council as provided in Government Code, Section 65359, and transmit a copy of this resolution to

the Planning Commission and the Director of Planning of the County of San Diego.

4. The General Plan previously approved by the City Council is set aside and modified to the extent it is in conflict with the text adopted by paragraph 1 hereof; and, except as amended and modified by this resolution, the General Plan of the City of Vista, as amended, shall remain in full force and effect.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Vista, held on the 12th day of May, 1975, by the following vote:

AYES: COUNCILMEN: Tracy, McClellan, Foo, Mihalek and Meyer

NOES: COUNCILMEN: None

ABSENT: COUNCILMEN: None

ATTEST:

Jean Brooks
JEAN BROOKS, City Clerk

Frank Meyer
FRANK MEYER, Mayor

CONTENTS APPROVED:

Brooks Cavanaugh Date 5-6-75
BROOKS CAVANAUGH, Director of Planning

SEISMIC SAFETY ELEMENT

I. INTRODUCTION AND BACKGROUND

The Seismic Safety Element identifies and evaluates seismic hazards which pose a potential threat to public safety in the City of Vista. These hazards will include: (a) surface ruptures, (b) ground shaking, (c) ground failures, (d) seismically induced waves, (e) mudslides, (f) landslides and (g) slope stability. Not all of these hazards would affect the Vista sphere of influence. However, they will be addressed since the object of the element is to protect the public health, safety and welfare from all hazards.

In order to obtain accurate information and a technically acceptable methodology for research, the City of Vista contracted with Burkland and Associates for a geotechnical survey of the community. The technical data, maps and charts contained in this element are taken from that survey.

The Seismic Safety Element, by considering geologic and seismic hazards, will act as a guide in directing the development of the City to reduce loss of life, injuries, damage to property and economic and social dislocations.

The scope of the element identifies seismic hazards in the Vista sphere of influence, establishes goals and objectives for seismic safety and an action program for implementation to reduce these hazards.

II. FINDINGS

A. Primary Seismic Hazards

Faults. There are no active faults in the sphere of influence for the City of Vista. The nearest active fault that could have consequence for the sphere area is the submarine Inglewood-Rose Canyon Fault located approximately five miles offshore west of Carlsbad. Since surface faulting tends to occur along established faults, and there are no active faults in the sphere area, the potential for ground rupture is insignificant.

B. Secondary Seismic Hazards

Ground Shaking. An earthquake of 6.5 or greater on the Richter Scale, with an epicenter along the Inglewood-Rose Canyon Fault, could affect the sphere area. Four other major active fault zones, which might affect this area, are the Elsinore, Aqua Caliente, San Jacinto and San Andreas. The effects of a major (7.0 or greater) earthquake along any of these zones would be significantly reduced before it reached this community but some damage could be sustained in certain areas from secondary effects.

Ground Failures. The valley floors of the San Luis Rey River, Loma Alta, Aqua Hedionda and Buena Vista Creeks and tributaries are most susceptible to liquefaction, lurch cracking, lateral spreading and soil subsidence. Structures located in these areas could sustain damage depending upon the level of ground failure.

The extent of structural damage from earthquake vibrations is determined by (1) the characteristics of underlying soils and/or rocks; (2) the design of the structure; (3) the quality of materials and workmanship employed in construction; (4) location of the epicenter and magnitude of the earthquake, and (5) the duration and intensity of ground shaking. The potential for structural damage is greatest in areas underlain by deep, soft, saturated alluvial soils and least in areas of hard bedrock. (See Geologic Map in the Geotechnic Report.)

Tsunami and Seiche. Due to Vista's inland location, there is no tsunami hazard whatsoever. A seiche in Peckstein Reservoir would not have any effect due to the small size of the reservoir and its isolated location.

Slope Stability. There is some minimal hazard of landslides from ground shaking during an earthquake in the weathered hardrock area soils and in the La Jolla Group soils, (soil types are specifically identified in the Geotechnic Report). The hardrock areas can decompose and disintegrate to very great depth due to highly fractured characteristic of these formations. Once decomposed and disintegrated these formations, less stable than underlying rock, are susceptible to slope stability problems. The La Jolla Group, a sedimentary formation of sandstones, siltstones, and claystones, is also susceptible to slope stability problems; particularly in the north-facing slopes, claystone beds and geologic shear zones.

C. Groundwater and Flood Plain Drainage

Groundwater. The only dependable sources of groundwater occur in the alluvial deposits and in the La Jolla Soil Group. These sources are currently used for rural domestic and agricultural purposes but, because of dissolved salts and minerals, the quality is questionable for domestic use. Groundwater is currently being consumed faster than it can be replaced causing salt water intrusions in the western portion of the sphere area. In some areas locally, high groundwater may cause special excavation problems. These problems should be identified and appropriate mitigation measures taken during all phases of development.

Flood Plain Drainage. Flood control measures have been established on portions of the drainage system. However, the potential for a significant flooding still remains in the sphere area and natural drainage courses should be maintained and development scrutinized or avoided to reduce potential property damage.

III. SUMMARY

A. About 40% of the study area could be developed for urban activity following routine geotechnical investigations of individual development sites, and utilizing conventional engineering methods and designs. (These areas are designated on the maps of the Geotechnic Study.)

B. About 60% of the study area has geologic conditions which would require that detailed geotechnical investigations be conducted on individual development sites in order to determine feasibility for urban use. Specialized engineering techniques and designs would generally have to be employed in these areas before development could proceed.

C. There are no known active faults in the study area. The nearest active fault is the Inglewood-Rose Canyon Fault about five miles offshore (west of Carlsbad-Oceanside).

D. Erosion and siltation are geotechnical problems currently in process.

E. Potential geotechnical problems include slope stability, flooding, excavation in areas of high groundwater levels and hard rocks, compressible and expansive soils and seismic effects.

F. Those portions of the study area underlain by deep, soft, saturated soils are susceptible to various modes of ground failure in the event of an earthquake.

IV. GOALS AND OBJECTIVES

A. Seismic Safety Goal

Make the community of Vista safer through the reduction of potential loss of life, injuries, damage to property and economic and social dislocations resulting from future seismic activity and related hazards.

Objectives:

1. Identify areas of seismic hazards and prohibit construction of public buildings and facilities in areas of significant seismic hazards.
2. Define acceptable risk with respect to seismic hazards.
3. Continuously update all pertinent current codes to ensure that new developments are not hazardous.

B. Acceptable Risk

If future projects address the soil situations as a primary environmental concern and building code requirements continue to consider seismic hazard in their provisions, a level of acceptable risk will be achieved. This level is defined as that level where further community action is not necessary to protect life and property from seismic hazards.

The community should, however, establish a systematic program of code enforcement, hazard abatement, and identification for existing structural hazards.

C. Seismic Safety Policies

1. Seismic hazards, when identified, shall be public information and appropriate warning against development of these areas shall be given in order to prevent future disasters and protect the City from liability.

2. Implement a coordinated program of enforcing Building and Fire Codes to ensure protection in identified seismic areas and encourage correction of all existing structural hazards.

3. Initiate a program of optimum public awareness of established safety procedures in the event of a disaster.

4. Take necessary measures to assure that all emergency services can maintain continued operation in the event of seismic disaster.

5. The City shall cooperate with all duly established regional entities that are qualified in the field of seismic hazard identification and analysis.

D. Flood Plain - Drainage

1. Identification:

There must be a careful and precise identification of areas in the community that have a possible flooding situation in the case that an inordinant amount of water is forthcoming from a 50 or 100 year storm. The areas have been identified on the Geotechnic Report Map.

2. Policies:

a) A Flood Plain (FP) Overlay Zone will be created and applied to property identified as being located in an area subject to flood.

b) Property in this area will be eligible for natural disaster insurance only if this FP Zone is designated.

c) The City will endeavor to acquire land in the "F-P", Flood Plain Zone, under the aegis of the open space element of this General Plan.

d) Drainage areas, where possible, should remain in their natural condition. If channelization is necessary, box channeling shall be applied.

E. Slope - The Terrain

Other factors notwithstanding, the Vista community has an abundance of slope variation that results in physical limits to community development. Furthermore, it is the same slope variation that contributes significantly to the community character of a semi-rural atmosphere and social charm.

1. Slope Classification:

Table A shows the community divided into four slope range classifications. (See Table A)

Generally the prime developable land is level land, or in this case, slope of 5% or less. The total planning area has approximately 20% of its land in this category. As the slope increases, the development alternatives decrease. There is also approximately 20% of the planning area, much of this in the San Marcos Hills, that is over 25% slope. This land is virtually undevelopable.

2. Land Use - Slope Matrix:

Land use intensity developments are directly related to the amount of slope. The greater the slope, the less flexible the development potential. The following table designates the relationship of slope and land use: (See Table B)

a. "Permitted uses" are those uses that, from a slope point of view (assuming zoning and other conditions are favorable), are appropriate developments for their respective slope categories.

b. "Special uses" are those uses that may be permitted if the development takes precautions to prevent potential problems. "Design Review" or an addressment to the slope situation by an environmental impact supplemental statement would sufficiently protect the integrity of the property.

c. "Prohibited uses" means that these uses have been determined to be incompatible with the slope classifications where they have been designated. Those uses listed as prohibited uses may be permitted only if justified by an environmental impact report and special discretionary site approval. All environmental impact reports performed for the City shall be addressed to slope in accordance with Table B.

3. Grading Policies:

Whereas the hills and sloping land have been identified as a community image resource, caution and scrutiny are in order with respect to grading. The community of Vista possesses several landscape scars where "borrow pit" operations have converted slope land into developable land. It is a specific

purpose of the grading control policies to minimize as much as reasonably possible the practice of massive earth moving and grading that is harmful to the Vista community image. The following grading policies shall apply to development in the Vista community:

a. Cut and/or fill slopes shall be planted and provided with a permanent, master-controlled, underground irrigation system.

b. Grading permits may be issued only in conjunction with a building permit for the improvement of the property. All grading not in conjunction with the improvement of the property shall require a special use permit. Said ordinances will not apply to grading in residential zoning where the cut is less than 1' (one foot) and/or the movement of earth does not exceed 50 (fifty) cubic yards.

Hopefully, the future development of the community will respect the natural terrain and take advantage of the community image, rather than detract from that resource which is responsible for making community development so desirable.

V. IMPLEMENTATION

Based on the presence and severity of geologic and seismic hazards,

the geotechnical evaluation map (Map 1) identifies six levels of seismic hazards throughout the sphere area. Table C, The Rating of Geotechnical Problems, relates the severity of engineering and seismic problems in each of these six areas.

Table D, The Investigation for Basic Types of Development Table, delineates the level of geotechnic investigations required for each type of structural development. The type and extent of investigation required depends on the need to determine the precise nature and severity of geologic and seismic hazards for each individual development site. These investigations will determine whether there are specific geologic or seismic problems for a development site. Mitigating engineering techniques exist which could reduce these problems to an acceptable level of risk. However, some solutions may not be aesthetically pleasing, economically feasible, or politically acceptable.

If these mitigating engineering techniques are not acceptable, the geological conditions of the community definitely constrict development potential. A project shall not be approved if these investigations for geologic and seismic hazards are not completed and mitigating engineering techniques employed.

Table E indicates the areas to be addressed for either a routine or detailed geotechnic report on the various geologic problems. All

future projects shall address the issues designated in this table. All items not designated routine, should be addressed in an environmental impact report. Unless mitigation measures are available, projects shall be denied on the basis of geotechnic hazards or sufficiently reduced; e.g., fewer units, reduction of building height or area, etc., to a level of acceptable risk. All detailed reports shall be submitted with a certification by a reputable geological engineer.

During all phases of development, slope stability problems shall be accounted for according to Table F. This table relates development activity to potential slope stability hazards and minimizing measures. These measures shall be adhered to to minimize the effects of grading on slope stability during development.

MAP. I

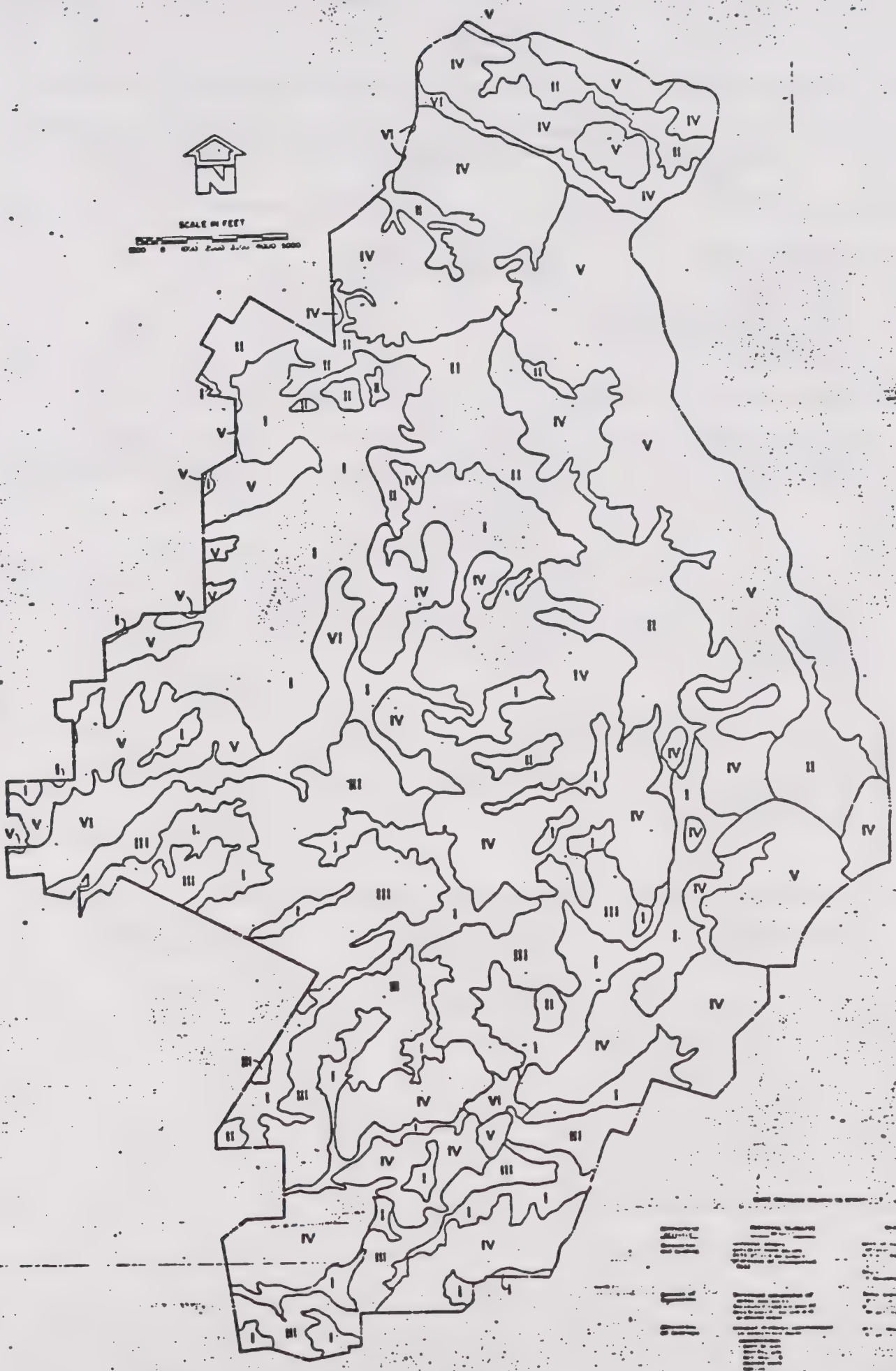

TABLE II

SLOPE - LAND USE MATRIX			
PERCENT SLOPE	PERMITTED USES	SPECIAL USES	PROHIBITED USES
0-5	Agricultural, Industrial, Commericial, All Residential Uses, Institutional-Public Uses	Very High and High Density Residential	None
6-10	Low to Medium Density Residential, Agricultural	Neighborhood Commercial, High Density Residential, Medium High Density Residential, Institutional Uses	General Industrial, Very High Density Residential, General Commercial
11-15	Low and Medium Low Density Residential, Agricultural	Institutional Uses, Medium Density Residential	All Industrial, And Commercial, Very High, High and Medium High Density Residential
16-25	Agricultural, Low Density Residential, Open Public Uses	Institutional Uses,	All Industrial and Commercial, Medium Low to Very High Density Residential
Over 25	Open Space	Agricultural, Recreational Very Low Density Residential	All Other Uses

TABLE III

RATING OF GEOTECHNICAL PROBLEMS

	Engineering						Seismic				
Map Symbol	Flood Potential	Slope Stability	Erosion & Siltation	Excavation	Groundwater	Expansive Soil	Lurch Cracking	Liquefaction	Lateral Spreading	Vibration Damage	Subsidence & Uplift
I	△+	△+	△+-○+	△+	□	○+	△+	△+	△+	□+	△+
II	NA	△+	△+	□-○+	NA	□	NA	NA	NA	△	NA
III	NA	△+-○+	□-○+	△+	△+	□	NA	NA	NA	□	NA
IV	NA	△+-□	□+-□	□+	△+	□	NA	NA	NA	△-□+	NA
V	NA	□-○+	□-○+	□-○+	△+	□	NA	NA	NA	△-□+	NA
VI	○	NA	□-○+	○+	□	○+	□+	□+	□+	○+	□+

○ Major
□ Moderate
△ Minor

NA Not Applicable
\+ Locally

MAP SYMBOL	RESIDENTIAL	HIGH RISE	CRITICAL STRUCTURES*	LIGHT COMMERCIAL	HEAVY INDUSTRY
I	EG - R SF - R SH - R EC - R SL - R F - R O - NA	EG - R SF - R SH - D EC - R SL - R F - R O - NA	EG - R SF - R SH - D EC - R SL - R F - R O - NA	EG - R SF - R SH - R EC - R SL - R F - R O - NA	EG - R SF - R SH - D EC - R SL - R F - R O - NA
II	EG - D SF - R SH - R EC - R SL - R F - NA O - NA	EG - D SF - R SH - D EC - R SL - R F - NA O - NA	EG - D SF - R SH - D EC - R SL - R F - NA O - NA	EG - D SF - R SH - R EC - R SL - R F - NA O - NA	EG - D SF - R SH - D EC - R SL - R F - NA O - NA
III	EG - R SF - R SH - R EC - D SL - D F - NA O - NA	EG - D SF - D SH - D EC - R SL - D F - NA O - NA	EG - D SF - D SH - D EC - R SL - D F - NA O - NA	EG - R SF - R SH - R EC - D SL - D F - NA O - NA	EG - R SF - R SH - D EC - D SL - D F - NA O - NA
IV	EG - D SF - R SH - R EC - R SL - D F - NA O - NA	EG - D SF - R SH - D EC - R SL - D F - NA O - NA	EG - D SF - D SH - D EC - R SL - D F - NA O - NA	EG - D SF - R SH - R EC - R SL - R F - NA O - NA	EG - D SF - R SH - D EC - R SL - D F - NA O - NA
V	EG - D SF - R SH - R EC - D SL - D F - NA O - NA	EG - D SF - D SH - D EC - D SL - D F - NA O - NA	EG - D SF - D SH - D EC - D SL - D F - NA O - NA	EG - D SF - R SH - D EC - D SL - D F - NA O - NA	EG - D SF - D SH - D EC - D SL - D F - NA O - NA
VI	EG - R SF - D SH - R EC - D SL - NA F - D O - NA	EG - D SF - D SH - D EC - R SL - NA F - D O - NA	EG - D SF - D SH - D EC - R SL - NA F - D O - NA	EG - R SF - D SH - D EC - D SL - NA F - D O - NA	EG - R SF - D SH - D EC - D SL - NA F - D O - NA

EG: ENGINEERING GEOLOGIC

SF: SOIL AND FOUNDATION

SH: SEISMIC HAZARD

EC: EROSION CONTROL

SL: SLOPE STABILITY

F: FLOODING

O: OCEANOGRAPHIC

R: ROUTINE

D: DETAILED

NA: GENERALLY NOT APPLICABLE

* CRITICAL STRUCTURES ARE DEFINED AS THOSE WHICH ARE HIGH OCCUPANCY MUST REMAIN IN OPERATION DURING AN EMERGENCY SUCH AS; POLICE AND FIRE STATIONS, SCHOOLS, HOSPITALS, STADIUMS, ETC.

TABLE VI

SLOPE STABILITY RELATED TO DEVELOPMENT

DEVELOPMENT ACTIVITY	POTENTIAL STABILITY HAZARDS	MEASURES TO MINIMIZE STABILITY HAZARDS
Excavation and Grading	undercut slopes oversteepened slopes fill placed on slopes placement of uncompacted fill	minimal excavation and grading wherever possible cut and fill slopes 2:1 or flatter depending on analysis of local conditions key compacted fill into underlying materials
Removal of Vegetation	increased saturation of soils and rocks increased surface runoff accelerated erosion and sedimentation	leave vegetation intact wherever possible plant appropriate vegetation on slopes and cleared areas
Alteration of Drainage	natural drainage concentrated in restricted areas concentrated rainfall runoff from impervious surfaces (roofs, pavements, etc.) resulting in local accelerated erosion and sedimentation locally increased saturation of soils and rocks from lawn watering, septic tank leach fields, swimming pools, etc.	design around natural drainage wherever possible divert surface runoff away from slopes into natural or constructed drainage channels design drainage systems with weirs, check dams, and settling basins install subsurface drains where necessary minimal construction of impervious pavements locate leach fields, etc. away from steep slopes
Construction	inappropriate location of buildings, swimming pools, etc.	design and locate structures in accordance with properties of underlying soils and rocks, considering weight loading and water saturation effects locate structures away from steep slopes